Y082374

Traditional 510(k) Premarket Notification GE Vivid i/q BT09 Ultrasound System July 31, 2008

SEP - 2 2008

Section 2

Summary of Safety and Effectiveness

Prepared in accordance with 21 CFR Part 807.92(c).



1.

GE Healthcare

General Electric Company P.O. Box 414, Milwaukee, WI 53201

Section a):

Submitter: GE Medical Systems Israel, Ultrasound LTD

Haetgar Str. 4

Tirat Carmel, ISRAEL 39120

Contact Person: Israel Citron.

> Quality Assurance and Regulatory Affairs manager Telephone: 972-4-8519-555; Fax: 972-4-8519-500

Date Prepared: July 31, 2008

2. Device Name:

GE Vivid-i and Vivid q Diagnostic Ultrasound System

Ultrasonic Pulsed Doppler Imaging System, 21 CFR 892.1550, 90-IYN Ultrasonic Pulsed Echo Imaging System, 21 CFR 892.1560, 90-IYO Diagnostic Ultrasonic Transducer, 21 CFR 892.1570, 90-ITX

- 3. Marketed Device: GE Vivid-i Ultrasound System, K061525 currently in commercial distribution.
- 4. <u>Device Description</u>: The GE Vivid-i and Vivid-q is compact and portable diagnostic ultrasound system with integrated keyboard, fold-up LCD type display and interchangeable electronic-array transducers. It has an overall size approximately 36 cm wide, 31.5 cm deep and 6 cm high in transport configuration and provides digital acquisition, processing and display capability. The user interface includes a computer keyboard, an intuitive layout of specialized controls, color GUI display and Doppler audio.
- 5. Indications for Use: The device is intended for use by a qualified physician for ultrasound evaluation of Fetal; Abdominal; Pediatric; Small Organ (breast, testes, thyroid); Neonatal Cephalic; Adult Cephalic; Cardiac (adult and pediatric); Peripheral Vascular; Musculo-skeletal Conventional and Superficial; Urology (including prostate); Transesophageal; Transrectal; Transvaginal, Intraoperative (abdominal, thoracic, and vascular), Intra-cardiac and Inra-luminal.
- 6. Comparison with Predicate Device: The modified GE Vivid-i is of a comparable type and substantially equivalent to the currently marketed GE Vivid-i. It is a compact and readily portable unit having the same design, construction, and materials; is comparable in key safety and effectiveness features. It has the same intended uses as the predicate device and additional software features are identical to that of other cleared GE Ultrasound systems.

#### Section b):

- 1. Non-clinical Tests: The device has been evaluated for acoustic output, biocompatibility, cleaning and disinfection effectiveness as well as thermal, electrical and mechanical safety, and has been found to conform with applicable medical device safety standards.
- 2. Clinical Tests: None required.
- 3. Conclusion: Intended uses and other key features are consistent with traditional clinical practice, FDA guidelines, and established methods of patient examination. The design and development process of the manufacturer conforms with 21 CFR 820, ISO 9001 and ISO13485 quality systems. The device conforms to applicable medical device safety standards and compliance is verified through independent evaluation with ongoing factory surveillance. Diagnostic ultrasound has accumulated a long history of safe and effective performance. Therefore, it is the opinion of GE Medical Systems that the GE Vivid-i and Vivid-q Diagnostic Ultrasound is substantially equivalent with respect to safety and effectiveness to devices currently cleared for market.

#### DEPARTMENT OF HEALTH & HUMAN SERVICES





Food and Drug Administration 9200 Corporate Boulevard Rockville MD 20850

GE Medical Systems, Ultrasound % Mr. Mark Job Responsible Third Party Official Regulatory Technology Services LLC 1394 25<sup>th</sup> Street NW BUFFALO MN 55313

SEP - 2 2008

Re: K082374

Trade/Device Name: Vivid - i and Vivid - q Diagnostic Ultrasound System

Regulation Number: 21 CFR 892.1550

Regulation Name: Ultrasonic pulsed doppler imaging system

Regulatory Class: II

Product Code: IYN, IYO, and ITX

Dated: August 15, 2008 Received: August 18, 2008

Dear Mr. Job:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

This determination of substantial equivalence applies to the following transducers intended for use with the Vivid - i and Vivid - q, as described in your premarket notification:

#### Transducer Model Number

Vivid i/q with M4S-RS	Vivid i/q with 3C-RS	Vivid i/q with 3S-RS	Vivid i/q with 9T-RS
Vivid i with 4C-RS	Vivid i/q with 8C-RS	Vivid i/q with 7S-RS	Vivid i/q with P2D
Vivid i with 12L-RS	Vivid i/q with 8L-RS	Vivid i/q with 10S-RS	Vivid i/q with P6D
Vivid i/q with 5S-RS	Vivid i/q with i12L-RS	Vivid i/q with 6T/6Tc-R	S Vivid i/q with 6S-RS
	Vivid i/q with	AcuNav™ 10F	-

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the <u>Federal Register</u>.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any

Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This determination of substantial equivalence is granted on the condition that prior to shipping the first device, you submit a postclearance special report. This report should contain complete information, including acoustic output measurements based on production line devices, requested in Appendix G, (enclosed) of the Center's September 30, 1997 "Information for Manufacturers Seeking Marketing Clearance of Diagnostic Ultrasound Systems and Transducers." If the special report is incomplete or contains unacceptable values (e.g., acoustic output greater than approved levels), then the 510(k) clearance may not apply to the production units which as a result may be considered adulterated or misbranded.

The special report should reference the manufacturer's 510(k) number. It should be clearly and prominently marked "ADD-TO-FILE" and should be submitted in duplicate to:

Food and Drug Administration Center for Devices and Radiological Health Document Mail Center (HFZ-401) 9200 Corporate Boulevard Rockville, Maryland 20850

This letter will allow you to begin marketing your device as described in your premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus permits your device to proceed to market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (240) 276-3150 or at its Internet address <a href="http://www.fda.gov/cdrh/industry/support/index.html">http://www.fda.gov/cdrh/industry/support/index.html</a>

If you have any questions regarding the content of this letter, please contact Ms. Lauren Hefner at (240) 276-3666.

Sincerely yours,

Nancy C. Brogdon

Director, Division of Reproductive, Abdominal and Radiological Devices

Office of Device Evaluation

Center for Devices and Radiological Health

# Diagnostic Ultrasound Indications for Use Form GE Vivid-i and Vivid-q Diagnostic Ultrasound System

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

					Mode	of Ope	eration				_
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	Other
Ophthalmic											
Fetal	Р	Р	P	P	P	Р	Р	Р	Р	Р	
Abdominal <sup>[1]</sup>	P	Р	P	P	P	Р	Р	P	Р	P	
Pediatric	Р	Р	Р	Р	Р	Р	Р	Р	Р	Р	
Small Organ (specify) <sup>[2]</sup>	Р	Р	P		Р	E	Р	Р	Р	Р	
Neonatal Cephalic	Р	P	Р	Р	Р	Р	Р	P	Р	Р	
Adult Cephalic	Р	Р	Р	Р	Р	P	Р	P	Р	P	
Cardiac <sup>[3]</sup>	Р	Р	Р	Р	Р	P	Р	Р	Р	P	
Peripheral Vascular	Р	Р	Р	Р	Р	E	Р	Р	Р	P	
Musculo-skeletal Conventional	Р	Р	Р		Р	E	Р	Р	P	P	
Musculo-skeletal Superficial	Р	P	Р		Р	E	Р	Р	P	Р	
Other <sup>[4]</sup>	Р	Р	Р		Р	E	Р	Р	P	P	
Exam Type, Means of Access											
Transesophageal	Р	Р	Р	P	P	P		P	Р		
Transrectal											
Transvaginal										_	
Transuretheral											
Intraoperative (specify)[5]	Р	Р	Р	N	P		Р	Р	Р		
Intraoperative Neurological											
Intracardiac and Intraluminal	N	N	N	N	N	N		N	N		
Laparoscopic											

N = new indication; P = previously cleared by FDA; E = added under Appendix E

Notes:	[1]	Abdom	inal i	ncludes	Renal

- [2] Small organ includes breast, testes, thyroid.
- [3] Cardiac is Adult and Pediatric.
- [4] Other use includes Urology.
- [5] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV).
- [\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.
- [\*] Coded Pulse includes Coded Octave Imaging (COI), and Coded Phase Inversion (CPI).

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Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription User (Per 21 CFR 801.109)

(Division Sign-Off)

Division of Reproductive, Abdominal,

and Radiological Devices

510(k) Number\_

086514

# GE Vivid i/q with M4S-RS Transducer

Intended Use: Uli								o Huillai	body a:	Sidilow	5.
Clinical Application			<del></del>	,	Mode	of Ope	eration				
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	Other
Ophthalmic					-						
Fetal	N	N	N	N	N	N		N	N N	N	
Abdominal <sup>[1]</sup>	N	N	N	N	N	N	N	N	N	N	<del>-</del>
Pediatric	N	N	N	N	N	N	N	N	N	N	<del></del>
Small Organ (specify)								- "		- 14	
Neonatal Cephalic											<u> </u>
Adult Cephalic	N	N	N	N	N	N	N	N	N	N	ļ <del></del>
Cardiac <sup>[2]</sup>	N	N	N	N	N	N		N.	N	N	
Peripheral Vascular									. '\	- 11	<del> </del>
Musculo-skeletal Conventional											<u> </u>
Musculo-skeletal Superficial											ļ- <b>-</b>
Other (specify)											<del></del>
Exam Type, Means of Access											
Transesophageal											
Transrectal											
Transvaginal											
Transuretheral											
Intraoperative (specify)											<del></del>
Intraoperative Neurological											
Intracardiac and Intraluminal											<u>_</u>
Laparoscopic											

N = new indication (transducer previously cleared with Vivid 7 system K051449); P = previously cleared by FDA; E = added under Appendix E

Notes:	[1] Abdominal includes Renal	
	[2] Cardiac is Adult and Pediatric.	

[\*] Combined modes are B/M, B/Color M, B/PWD or CWD, B/Color/PWD or CWD, B/Power/PWD.

[P] Coded Pulse includes Coded Octave Imaging (COI), and Coded Phase Inversion (CPI).

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Concurrence of CDRH, Office of Device Evaluation (ODE)	

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Prescription User (Per 21 CFR 801.109)

(Division Sign-Off)

Division of Reproductive, Abdominal,

and Radiological Devices

510(k) Number <u></u> +09257

#### Diagnostic Ultrasound Indications for Use Form GE Vivid-i with 4C-RS Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

011 1 1 1 1 1 1			·		Mode	of Ope	ration				
Clinical Application  Anatomy/Region of Interest	8	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes	Harmonic Imaging	Coded Pulse	Othe
Ophthalmic							<u> </u>				
Fetal	P	Р	Р		P	Ε	P	Р	P	P	
Abdominal <sup>[1]</sup>	Δ.	Р	Р		Р	Ε	P	P	p	P	<u> </u>
Pediatric							<u>-</u>	•	•	•	
Small Organ (specify)					_						
Neonatal Cephalic											
Adult Cephalic						-					
Cardiac							**				
Peripheral Vascular											
Musculo-skeletal Conventional											-
Musculo-skeletal Superficial					-						-
Other <sup>[2]</sup>	P	P	Р		Р	E	Р	P	P	P	<u> </u>
Exam Type, Means of Access								·•			
Transesophageal										<del></del>	
Transrectal					-						
Transvaginal										`	
Transuretheral									_	<u> </u>	
Intraoperative (specify)											
Intraoperative Neurological											
Intracardiac and Intraluminal											-
Laparoscopic											

N = new indication; P = previously cleared by FDA (K061525); E = added under Appendix E

rivos, Til Abdollillia includes Rena	lotes:	l includes Rena	l Abdominal
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- [2] Other use includes Urology.
- [\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.
- [\*] Coded Pulse includes Coded Octave Imaging (COI), and Coded Phase Inversion (CPI).

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Prescription User (Per 21 CFR 801.109)

(Division Sign-Off)

Division of Reproductive, Abdominal,

and Radiological Devices

510(k) Number

082374

# Diagnostic Ultrasound Indications for Use Form GE Vivid-i with 12L-RS Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

					Mode	of Ope	eration				
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes	Harmonic Imaging	Coded Pulse	Othe
Ophthalmic							<del></del>				
Fetal											_
Abdominal						-					
Pediatric						-					
Small Organ <sup>[1]</sup>	Р	Р	Р		Р	Е	Р	Р	Р	Р	
Neonatal Cephalic									•	•	<del></del>
Adult Cephalic		L									
Cardiac							-				
Peripheral Vascular	Р	Р	Р		P	E	P	Р	Р	Р	<u> </u>
Musculo-skeletal Conventional	Р	Р	Р		Р	Ε	Р	P	P	P	
Musculo-skeletal Superficial	P	Р	Р		Р	E	P	P	Р	<u>.</u> Р	
Other (specify)										<del>`</del>	
Exam Type, Means of Access											
Transesophageal											_
Transrectal											
Transvaginal										_	
Transuretheral											
Intraoperative (specify)								-			
Intraoperative Neurological											
Intracardiac and Intraluminal										-	
Laparoscopic											<del>                                     </del>

(PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE IF NEEDED)  Concurrence of CDRH, Office of Device Evaluation (ODE)	
	. =.
[*] Coded Pulse includes Coded Octave Imaging (COI), and Coded Phase Inversion (CPI).	
[*] Combined modes are B/M, B/PWD, B/Color/PWD, B/Power/PWD.	
Notes: [1] Small organ includes breast, testes, thyroid.	

Prescription User (Per 21 CFR 801.109)

(Division Sign-Off)
Division of Reproductive, Abdominal, and Radiological Devices
510(k) Number 082374

# Diagnostic Ultrasound Indications for Use Form GE Vivid-i/q with 5S-RS Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

<b>A</b> 11	Mode of Operation										
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	Other
Ophthalmic											<u> </u>
Fetal	Р	Р	Р	P	Р	Р		Р	Р	P	<u> </u>
Abdominal							<u> </u>	-	•	<del></del>	<del></del>
Pediatric	Р	P	Р	Р	Р	P	Р	Р	Р	<u> </u>	
Small Organ (specify)									-		<del>                                     </del>
Neonatal Cephalic				_						1	<u> </u>
Adult Cephalic							· · · · · · · · · · · · · · · · · · ·				<del> </del>
Cardiac <sup>[1]</sup>	Р	Р	Р	Р	Р	Р		Р	P	P	<del>                                     </del>
Peripheral Vascular						-		•	<b>-</b>		
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											<del>                                     </del>
Other											
Exam Type, Means of Access											<del></del>
Transesophageal											
Transrectal											<b></b> -
Transvaginal											<del> </del>
Transuretheral											<u> </u>
Intraoperative (specify)										··	<u> </u>
Intraoperative Neurological											
intracardiac and Intraluminal								·			
Laparoscopic											

in - new indication; P = previously	cleared by FDA (K061	1525); E = added und	er Appendix F
Notes: [1] Cardiac is Adult and Pe	diatric.	,, , , , , , , , , , , , , , , , , , , ,	or appointment

[\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

[\*] Coded Pulse includes Coded Octave Imaging (COI), and Coded Phase Inversion (CPI).

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Prescription User (Per 21 CFR 801.109)

(Division Sign-Off) / Division of Reproductive, Abdominal, and Radiological Devices,

510(k) Number.

# Diagnostic Ultrasound Indications for Use Form GE Vivid-i/q with 3C-RS Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

	Mode of Operation										
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	Othe
Ophthalmic									·-··		
Fetal	Р	Р	Р		Р	Ε		Р	Р	Р	
Abdominal <sup>[1]</sup>	P	Р	P		Р	E	Р	Р	Р	Р	
Pediatric	Р	P	Р		Р	E	P	Р	Р	Р	
Small Organ (specify)											
Neonatal Cephalic	-										<u> </u>
Adult Cephalic											
Cardiac											┢
Peripheral Vascular											
Musculo-skeletal Conventional											_
Musculo-skeletal Superficial							- *				<u> </u>
Other <sup>[2]</sup>	Р	Р	Р		Р	Ε	P	Р	P	P	<u> </u>
Exam Type, Means of Access					-				7		
Transesophageal											
Transrectal											_
Transvaginal											
Transuretheral											_
Intraoperative (specify)											-
Intraoperative Neurological											
Intracardiac and Intraluminal											_
Laparoscopic											<del>                                     </del>

N = new indication; P = previously cleared by FDA (K033139); E = added under Appendix E

Notes:	[1] Abdo	ominal	includes	Renal.
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- [2] Other use includes Urology.
- [\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.
- [\*] Coded Pulse includes Coded Octave Imaging (COI), and Coded Phase Inversion (CPI).

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Prescription User (Per 21 CFR 801.109)

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Division of Reproductive, Abdominal, and Radiological Devices

510(k) Number K682374

#### GE Vivid-i/q with 8C-RS Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

	Mode of Operation										
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppier			Harmonic Imaging	Coded Pulse	Other
Ophthalmic											
Fetal											
Abdominal	Р	P	Р		þ	Е	Р	Р	Р	P	
Pediatric	P	Р	P		Р	E	Р	Р	Р	Р	
Small Organ (specify)[1]	Р	P	P		Р	Ε	Р	Р	Р	Р	
Neonatal Cephalic	Р	P	P		Р	E	Р	Р	Р	р	
Adult Cephalic					1						
Cardiac											
Peripheral Vascular	Р	P	P		Р	E	Р	Р	Р	Р	
Musculo-skeletal Conventional											-
Musculo-skeletal Superficial									-		·
Other											
Exam Type, Means of Access											
Transesophageal											
Transrectal											
Transvaginal											
Transuretheral											
Intraoperative (specify)											
Intraoperative Neurological											
Intracardiac and Intraluminal											<del>                                     </del>
Laparoscopic											<del>                                     </del>

N = new indication; P = previously cleared by FDA (K033139); E = added under Appendix E

Notes:	[1] Smali	organ inc	dudes bre	ast, testes,	thyroid.	
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Prescription User (Per 21 CFR 801.109)

(Division Sign-Off)

Division of Reproductive, Abdominal, and Radiological Devices

510(k) Number

<sup>[\*]</sup> Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

<sup>[\*]</sup> Coded Pulse includes Coded Octave Imaging (COI), and Coded Phase Inversion (CPI).

# GE Vivid i/g with 8L-RS Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

	Mode of Operation										
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	Other
Ophthalmic											
Fetal											
Abdominal	P	Р	Р		Р	E	Р	Р	Р	P	<u> </u>
Pediatric	P	P	Р		Р	Е	Р	Р	Р	P	<u> </u>
Small Organ (specify)[1]	Р	P	Р		Р	Ε	Р	Р	Р	P	
Neonatal Cephalic											<del></del>
Adult Cephalic											
Cardiac						**					
Peripheral Vascular	P	Р	Р		P	E	P	Р	P	Р	
Musculo-skeletal Conventional	Р	Р	Р		Р	E	Р	Р	P	P	
Musculo-skeletal Superficial	P	Р	Р		Р	E	P	Р	<u>-</u> Р	P	
Other									•	•	
Exam Type, Means of Access											
Transesophageal											
Transrectal											
Transvaginal											
Transuretheral										-	<del>                                     </del>
Intraoperative (specify)											
Intraoperative Neurological											
Intracardiac and Intraluminal											<u> </u>
Laparoscopic											

N = new indication; P = previously cleared by FDA (K033139); E = added under Appendix E

Notes:	[1] Small organ includes breast,	testes.	thyroid.
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Concurrence of CDRH, Office of Device Evaluation (ODE)	

Prescription User (Per 21 CFR 801.109)

(Division Sign-Off)

Division of Penroductive Abdominal

Division of Reproductive, Abdominal,

and Radiological Devices

510(k) Number\_\_\_\_\_

<sup>[\*]</sup> Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

<sup>[\*]</sup> Coded Pulse includes Coded Octave Imaging (COI), and Coded Phase Inversion (CPI).

### GE Vivid i/q with i12L-RS Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

_	Mode of Operation										
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	Other
Ophthalmic											<del>                                     </del>
Fetal											<b></b>
Abdominal	Р	Р	Р		P	E	P	Р	Р		<del> </del>
Pediatric	Р	Р	Р		Р	E	P	Р	P	_	<u> </u>
Small Organ (specify)[1]	Р	Р	Р		Р	Ε	P	P	Р		<b></b>
Neonatal Cephalic					*				<u>, ,                                  </u>		<del> </del>
Adult Cephalic	_										
Cardiac <sup>[2]</sup>	Р	P	Р		Р	Ē		Р	P		<b>—</b>
Peripheral Vascular	Р	Р	Р		Р	E	Р	P	P		
Musculo-skeletal Conventional	Р	Р	Р		Р	E	P	Р	P		<del>                                     </del>
Musculo-skeletal Superficial	Р	Р	Р		Р	E	Р	P	P		
Other										_	<del>                                     </del>
Exam Type, Means of Access											<del>                                     </del>
Transesophageal											
Transrectal											$\vdash$
Transvaginal											
Transuretheral											
Intraoperative (specify)[3]	Р	P	Р		Р	E	P	P	P		<del>                                     </del>
Intraoperative Neurological								<u> </u>	•		
Intracardiac and Intraluminal										-	$\overline{}$
Laparoscopic										-	$\vdash$

N = new indication; P = previously cleared by FDA (K033139); E = added under Appendix E

- [2] Cardiac is Adult and Pediatric.
- [3] Intraoperative includes abdominal, thoracic (cardiac), and vascular (PV).
- [\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

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Division of Reproductive, Abdominal, and Radiological Devices
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### Diagnostic Ultrasound Indications for Use Form GE Vivid i/q with 3S-RS Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

	Mode of Operation											
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	Other	
Ophthalmic											-	
Fetal	Ρ	Р	Р	Р	Р	Р		P	Р	р		
Abdominal <sup>[1]</sup>	Р	Р	P	Р	P	Р	Р	P	Р	Р		
Pediatric	Р	P	P	P	Р	Р	Р	Р	Р	Р		
Small Organ (specify)												
Neonatal Cephalic											•	
Adult Cephalic	Р	P	Р	P	Р	Р	Р	Р	Р	P		
Cardiac <sup>[2]</sup>	Р	P	Р	Р	Р	Р		P	Р	Р		
Peripheral Vascular												
Musculo-skeletal Conventional												
Musculo-skeletal Superficial							ľ					
Other												
Exam Type, Means of Access												
Transesophageal												
Transrectal												
Transvaginal												
Transuretheral												
Intraoperative (specify)												
Intraoperative Neurological												
Intracardiac and Intraluminal												
Laparoscopic  N = pew indication: P = pr									1			

N = new indication; P = previously cleared by FDA (K033139); E = added under Appendix E Notes: [1] Abdominal includes Renal.

(*) Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWI	
[*] Coded Pulse includes Coded Octave Imaging (COI), and Coded Phase Inver	sion (CPI).

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510(k) Number.

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# Diagnostic Ultrasound Indications for Use Form <u>GE Vivid i/g with 7S-RS Transducer</u>

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

	Mode of Operation											
Clinical Application Anatomy/Region of Interest	8	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes	Harmonic Imaging	Coded Pulse	Other	
Ophthalmic												
Fetal	Ε	E	E	E	Ε	E		E	E			
Abdominal	Р	P	Р	Р	Р	Р	P	Р	Р		_	
Pediatric	Р	P	Р	Р	Р	Р	Р	Р	Р			
Small Organ (specify)												
Neonatal Cephalic	P	P	Р	Р	Р	Р	Р	P	Р		<del></del>	
Adult Cephalic			<del></del>			<u> </u>						
Cardiac <sup>[1]</sup>	Р	Р	Р	Р	P	P	Р	P	P		<b></b>	
Peripheral Vascular	Ε	E	E	E	E	E	E	E	E			
Musculo-skeletal Conventional												
Musculo-skeletal Superficial												
Other												
Exam Type, Means of Access												
Transesophageal												
Transrectal												
Transvaginal											<u> </u>	
Transuretheral								· · · · · · ·				
Intraoperative (specify)												
Intraoperative Neurological												
Intracardiac and Intraluminal												
Laparoscopic												

N = new indication; P = previously cleared by FDA (K033139); E = added under Appendix E Notes: [1] Cardiac is Adult and Pediatric.

[\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

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510(k) Number.

### Diagnostic Ultrasound Indications for Use Form GE Vivid i/q with 10S-RS Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

Mode of Operation												
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes	Harmonic Imaging	Coded Pulse	Othe	
Ophthalmic												
Fetal											<u> </u>	
Abdominal	P	Р	Р	P	Р	Р	Р	Р	P			
Pediatric	P	Р	Р	Р	Р	Р	Р	P	Р			
Small Organ (specify)									<del></del>			
Neonatal Cephalic	Р	P	Р	P	Р	Р	Р	Р	P			
Adult Cephalic								<u> </u>	<u> </u>			
Cardiac <sup>[1]</sup>	Р	Р	Р	Р	Р	Р		P	Р		<u> </u>	
Peripheral Vascular	E	Ε	E	E	E	Е	E	E	E			
Musculo-skeletal Conventional				_								
Musculo-skeletal Superficial											<del> </del> -	
Other								-				
Exam Type, Means of Access												
Transesophageal												
Transrectal												
Transvaginal												
Transuretheral												
Intraoperative (specify)											<u> </u>	
Intraoperative Neurological												
Intracardiac and Intraluminal										-		
Laparoscopic											<del> </del>	

N = new indication; P = previously cleared by FDA (K033139); E = added under Appendix E Notes: [1] Cardiac is Adult and Pediatric

[\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

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# Diagnostic Ultrasound Indications for Use Form GE Vivid i/g with 6T/6Tc-RS Transducer

Intended Use: Diagnostic ultrasound imaging or fluid flow analysis of the human body as follows:

	Mode of Operation										
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppier	Color M Doppler		Combined	Harmonic Imaging	Coded Pulse	Other
Ophthalmic											<del>                                     </del>
Fetal										<del></del>	<u> </u>
Abdominal									<del></del>	<del></del>	<del></del>
Pediatric							·				
Small Organ (specify)											<u> </u>
Neonatal Cephalic			1				· · ·				<del></del>
Adult Cephalic											
Cardiac <sup>[1]</sup>	P	Р	Р	Р	Р	P	-	P	P		
Peripheral Vascular						•					
Musculo-skeletal Conventional						<u> </u>		-			
Musculo-skeletal Superficial											
Other											
Exam Type, Means of Access					<del></del> -						
Transesophageal	Р	P	Р	Р	P	Р		Р	P		
Transrectal						<del>-</del> -		-	<u> </u>		
Transvaginal											
Transuretheral											
Intraoperative (specify)											
Intraoperative Neurological				-							
Intracardiac and Intraluminal											
Laparoscopic											<del></del>

in - new indication; P = previously cleared by	FDA (K033139); E = added under Appendix (
Notes: [1] Cardiac is Adult and Pediatric.	, and a substitution of the substitution of th

[\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

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# Diagnostic Ultrasound Indications for Use Form GE Vivid i/q with 9T-RS Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

_	Mode of Operation										
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	Other
Ophthalmic											
Fetal								7			
Abdominal										<u>.</u>	
Pediatric											
Small Organ (specify)										<del></del>	<del>                                     </del>
Neonatal Cephalic											<del>                                     </del>
Adult Cephalic							<u> </u>			· ·	<del>-</del>
Cardiac <sup>[1]</sup>	P	Р	P	Р	Р	P		Р	Р		
Peripheral Vascular								-	<u>'</u>		<del></del>
Musculo-skeletal Conventional											_
Musculo-skeletal Superficial					-						<del> </del>
Other											<del>                                     </del>
Exam Type, Means of Access						_					
Transesophageal	Р	Р	Р	P	P	Р		P	Р		_
Transrectal						-		<u> </u>	•		
Transvaginal											<del> </del>
Transuretheral									_		<u> </u>
Intraoperative (specify)											<del>                                     </del>
Intraoperative Neurological											
Intracardiac and Intraluminal											
Laparoscopic											<del>                                     </del>

N = new indication; P = previously cleared by FDA (K033139); E = added under Appendix E Notes: [1] Cardiac is Adult and Pediatric.

[\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

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# Diagnostic Ultrasound Indications for Use Form GE Vivid i/q with P2D Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

Olivia I.A. III	Mode of Operation										
Clinical Application Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler		Combined	Harmonic Imaging	Coded Pulse	Othe
Ophthalmic											<del>  -</del> -
Fetal / Obstetrics						_					_
Abdominal								-			
Pediatric											<u> </u>
Small Organ (specify)											
Neonatal Cephalic											
Adult Cephalic											
Cardiac <sup>[1]</sup>			Р	Р							
Peripheral Vascular		7.	Р	P							
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other											
Exam Type, Means of Access											
Transesophageal											
Transrectal											<u> </u>
Transvaginal											
Transuretheral											
Intraoperative (specify)											
Intraoperative Neurological				-			·				
Intracardiac and Intraluminal								-			<u> </u>
Laparoscopic									<del></del>		

14 - 1101	windication; P = previously cleared by FDA (K033139); E = added under Appendix E
Notes:	[1] Cardiac is Adult and Pediatric.

[\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

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# Diagnostic Ultrasound Indications for Use Form GE Vivid i/q with P6D Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

	Mode of Operation										
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M	Power	T	Harmonic Imaging	Coded Pulse	Other
Ophthalmic					<u> </u>			-			<del>                                     </del>
Fetal / Obstetrics						"					
Abdominal										_	<u> </u>
Pediatric											
Small Organ (specify)											<del></del>
Neonatal Cephalic											<b></b>
Adult Cephalic							<del></del>				··
Cardiac <sup>[1]</sup>			Р	P							<del>                                     </del>
Peripheral Vascular			Р	P							
Musculo-skeletal Conventional											ļ
Musculo-skeletal Superficial											<del> </del>
Other											<del> </del>
Exam Type, Means of Access						-					
Transesophageal								-		_	
Transrectal									· · · · · · ·	·····	<del></del> -
Transvaginal											<del></del>
Transuretheral											
Intraoperative (specify)									··-		
Intraoperative Neurological										-	
Intracardiac and Intraluminal										-	<b></b>
Laparoscopic											<b></b>

14 - UG	w indication; P = previously cleared b	y FDA (K033139); E =	added under Appendix F
Notes:	[1] Cardiac is Adult and Pediatric.		- Appendix E

[\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

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510(k) Number 682374

### Diagnostic Ultrasound Indications for Use Form GE Vivid i/q with 6S-RS Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

Clinical Application		Mode of Operation									
Anatomy/Region of Interest	В	M	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler		Harmonic Imaging	Coded Pulse	Othe
Ophthalmic											<del>                                     </del>
Fetal	N	N	N	N	N	N	N	N	N	<del></del>	
Abdominal	N	N	N	N	N	N	N	N	N	***	
Pediatric	N	N	N	N	N	N	N	N	N	<u> </u>	<u> </u>
Small Organ (specify)										<del></del>	<u> </u>
Neonatal Cephalic	N	N	N	N	N	N	N	N	N	·	<del>                                     </del>
Adult Cephalic										<u></u>	
Cardiac <sup>[1]</sup>	N	N	N	N	N	N	N	N	N		<del></del>
Peripheral Vascular											
Musculo-skeletal Conventional							-		<del>_</del>		<u></u>
Musculo-skeletal Superficial	_										<b></b>
Other											
Exam Type, Means of Access					***********					<del></del>	<del></del> _
Transesophageal											<del> </del>
Transrectal											
Transvaginal											
Transuretheral											
Intraoperative (specify)											
Intraoperative Neurological											
Intracardiac and Intraluminal											
Laparoscopic											

N = new indication (transducer previously cleared with LOGIQ-i/e and Vivid-e systems K072797); P = previously cleared by FDA; E = added under Appendix E

Notes:	<b>F11</b>	Cardiac	ie Adult	and	Padiatric

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510(k) Number 700319

<sup>[\*]</sup> Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

### Diagnostic Ultrasound Indications for Use Form GE Vivid i/q with AcuNav<sup>™</sup> 10F Transducer

Intended Use: Ultrasound imaging, measurement and analysis of the human body as follows:

	Mode of Operation										
Clinical Application  Anatomy/Region of Interest	В	М	PW Doppler	CW Doppler	Color Doppler	Color M Doppler	Power Doppler	Combined Modes	Harmonic Imaging	Coded Pulse	Other
Ophthalmic											
Fetal							-				
Abdominal											
Pediatric											
Small Organ (specify)											<u> </u>
Neonatal Cephalic										<u>.</u> '	
Adult Cephalic											<u> </u>
Cardiac [1]	N	N	N	N	N	N		N	N		
Peripheral Vascular											
Musculo-skeletal Conventional											
Musculo-skeletal Superficial											
Other										<del></del>	
Exam Type, Means of Access											
Transesophageal					-						
Transrectal								***			<u> </u>
Transvaginal											
Transuretheral						-					
Intraoperative (specify)											
Intraoperative Neurological											
Intracardiac and Intraluminal	N	N	N	N	N	N		N	N		
Laparoscopic								- 14			

N = new indication (transducer previously cleared as a stand alone medical device K033650); P = previously cleared by FDA; E = added under Appendix E

Notes: [1] Cardiac is Adult and Pediatric.

[\*] Combined modes are B/M, B/PWD, B/CWD, B/Color/PWD, B/Amplitude/PWD.

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